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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/786,309

02/26/2004

Pyung-Lae Kim

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EXAMINER

WATKO, JULIE ANNE

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,309

Applicant(s)

KIM, PYUNG-LAE

Examiner

Julie Anne Watko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/21/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9,13-16 and 18-25 is/are allowed.
- 6) ☒ Claim(s) 1-8 11-12 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 16 is objected to because of the following informalities: Claim 16 recites “wherein the folded portion is formed near one of the optical pickup and the board, and wherein the folded portion is formed near one of the optical pickup and the board.” This is redundant. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8, 10 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation “movement of said at least one movable part of the first and second part is configured to occur between a first position and a second position whereby corresponding movement of said flexible cable main body is configured to occur only to one side of the folded portion in the first position” in lines 7-10. The limitation “the folded portion in the first position” is inconsistent with “movement of said at least one movable part of the first and second part is configured to occur between a first position and a second position”, insofar as said first position is a position of a movable part of the first and second part, not a position of the main body.

Claims 2-8 are indefinite by virtue of their dependency from indefinite claim 1.

Claim 8 recites the limitation “the folded portion and the said flexible cable main body are vertically aligned.” Claim 1 recites the limitation “a folded portion formed by folding a portion of the cable main body” in line 6. Because the folded portion is part of the main body, it is unclear how the main body may be aligned with itself.

Claim 10 recites the limitation “movement of said at least one movable part of the first and second parts is configured to reciprocally occur along a prescribed range between a first position and a second position whereby corresponding movement of said flexible cable main body is configured to occur only to one side of the folded portion in the first position.” See above for claim 1.

Claim 10 recites the limitation “said flexible cable main body” in line 4. There is insufficient antecedent basis for this limitation in the claims.

Claim 12 recites the limitation “said disk drive” in the last line. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 11-12 are rejected under 35 U.S.C. 102(e) as anticipated by Schulz et al (US PAP No. 20030043508 A1).

As recited in claim 11, Schulz et al show a flexible cable 214, comprising: a first end 323 configured to be connected to a first part 328 and a second end 322 configured to be connected to a second part 110 so as to transmit signals between the first and second parts, at least one 110 of the first and second parts being movable; and at least one curved portion 234 formed by folding a portion (supported by 235) of the flexible cable, wherein a vertex of the curved portion does not deviate from vertical alignment (when Fig. 3 is rotated such that the portions are vertically aligned) with the first end, the curved portion and the second end.

As recited in claim 12, Schulz et al show that the flexible cable is configured to be directly connected to an optical (see ¶ 0017, "Disc drive 100 can be ... an optical disc drive") pickup 110 of said disk drive 100.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-8, to the extent understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz et al in view of Takahashi et al (US PAP No. 20040205785 A1).

As recited in claim 1, to the extent understood, Schulz et al show a flexible cable (see Fig. 3), comprising: a flexible cable main body (supported by 235) having one end 323 configured to connect to a first part 328 and the other end 322 configured to connect to a second part 110 on a side opposite to the first part and configured to transmit signals between the first and second parts, wherein at least one 110 of the first and second parts is movable; and a folded

portion (supported by 235) formed by folding a portion of the cable main body, wherein movement of said at least one movable part of the first and second part is configured to occur between a first position and a second position whereby corresponding movement of said flexible cable main body is configured to occur only to one side of the folded portion in the first position (to the extent understood).

As recited in claim 1, Schulz et al are silent regarding whether two opposing faces are in contact with each other.

As recited in claim 1, Takahashi et al show two opposing faces in contact with each other (see Figs. 6A-7, for example).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to contact two opposing faces as taught by Takahashi et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to achieve compactness as taught by Takahashi et al and as is notoriously well known in the art.

Furthermore, there is no invention in changing the shape of known parts, when the functioning of the apparatus is not changed by the reshaping. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

As recited in claim 2, Schulz et al show a folded-state maintaining device 235 configured to maintain a folded state of the folded portion.

As recited in claim 3, Schulz et al are silent regarding whether the folded-state maintaining device comprises an adhesive member configured to bond both faces of the folded portion to each other.

As recited in claim 3, Takahashi et al show an adhesive member 24.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the adhesive member of Takahashi et al on the flexible circuit of Schulz et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to prevent stray movement of the flexible circuit so as to avoid interference with moving parts as is notoriously well known in the art.

As recited in claims 4-6, Schulz et al are silent regarding folded plates, folding clips and wrapped tape.

Folded-state maintaining devices are known in the art. Specifically, adhesives, tapes, folded plates and clips with insertion slots are known as recited in claims 3-6.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a folded plate, clip, or wrap tape as a folded state maintaining device. The rationale is as follows: one of ordinary skill in the art would have been motivated to prevent unfolding so as to preserve the compactness of the device while avoiding interference with other parts of the device as was apparent to a person of ordinary skill in the art.

As recited in claim 7, Schulz et al are silent regarding whether the curved portion is relatively longer than the straight portion.

The law is replete with cases in which when the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected

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results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

The instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions. See *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the curved portion longer than the straight portion. The rationale is as follows: one of ordinary skill in the art would have been motivated to arrive at the claimed dimensions through the process of routine experimentation and optimization in the absence of criticality *Gardner v. TEC systems, Inc.*, 220 USPQ 777 (Fed. Cir. 1984).

As recited in claim 8, to the extent understood, Schulz et al show that the folded portion and the said flexible cable main body are vertically aligned (see Fig. 3, rotated so that the claimed alignment is vertical).

Allowable Subject Matter

8. Claims 9, 13-16 and 18-25 are allowed.

9. Claim 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 1-16 and 18-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wu (US PAP No. 20060005215 A1) show a disc drive and flexible cable assembly (see Fig. 3).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (571) 272-7597.

The examiner can normally be reached on Monday through Friday, 1PM to 10PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Julie Anne Watko, J.D.
Primary Examiner
Art Unit 2627

October 31, 2006
JAW

A handwritten signature in black ink, appearing to read 'Julie Anne Watko', with a stylized, flowing script.